Abstract:

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Title of the bachelor thesis: Use of biomarkers for the diagnosis and prevention of preeclampsia and eclampsia

Aim of the thesis:

The aim of this thesis was to gain an overview of preeclampsia, to summarize the findings of laboratory examinations for the diagnosis of this disease and to focus on the biochemical markers necessary to recognize the disease.

Main findings:

Preeclampsia is a hypertensive disease, which today is a major complication of pregnancy. Because of the undetermined etiology, neither the prediction nor the diagnosis of this disease is simple. The levels of some biomarkers, measurable in both blood and urine, make it easier to recognize the approaching disease before the first clinical manifestations. However, there is no factor that would reliably determine whether it is preeclampsia. Therefore, combinations of different markers are currently used.

Conclusion:

The number of markers shown here proves that it is not easy to define the most reliable ones. Today, physicians choose methods to investigate angiogenic factors and the ratio of soluble fms like tyrosine kinase to placental growth factor (sFlt-1/PIGF). Although the diagnosis of preeclampsia is still being investigated and improved, and biomarkers are still on the rise, in my opinion there is still a problem in inaccurate combination of methods that would accurately and reliably reveal that pregnant woman and fetus are at risk of preeclampsia.

Keywords: complications in pregnancy, biomarkers, preeclampsia and eclampsia